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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,151	09/21/2006	Masaki Yanagioka	Q97138	5036
23373 7590 12/10/2010 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER				
USELDING, JOHNE				
ART UNIT		PAPER NUMBER		
1763				
NOTIFICATION DATE		DELIVERY MODE		
12/10/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/599,151

Applicant(s)

YANAGIOKA, MASAKI

Examiner

John Uselding

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10, and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 11/30/10 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7, 10, and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not support the limitation "and the hydrogen desorption ratio of the carbon black is not less than 0.20%.". While an example has the value of 0.20%, the specification does not support a range of 0.20-100%.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 and 10-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sakakibara (6,197,870).

Regarding claims 1-3: Sakakibara teach a rubber composition for tire tread (column 1, lines 7-12) comprising 20-150 parts by weight of carbon black per 100 parts of a rubber component (claim 6). All the examples of Sakakibara are within the claimed range (Tables 4 and 5). The Applicant also claims the process by which the carbon black is made. This is a product by process limitation. Process limitations in product claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "In *re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed.

Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. See also *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). The examiner notes that Sakakibara teach that their process of producing carbon black using a production furnace having a combustion zone, reaction zone, and reaction stop zone coaxially connected together wherein the carbon black is made using a combustion reaction and includes a step of quenching the reaction (column 6, line 38 to column 7, line 18). Sakakibara teach examples where the TINT and the CTAB are within the claimed ranges (Table 8, Examples 4-7). Applicant claims that the hydrogen desorption ratio is greater than $0.260 \cdot 6.25 \times 10^{-4} \times \text{CATB}$. Sakakibara does not specifically teach this property for their carbon black. This is not a test that is normally used in the art to test the properties of carbon black. The Office takes the position that Examples 4-7 would inherently meet this limitation. All four (DBP, compressed DBP, CTAB, and TINT) of the physical property tests taught by Sakakibara meet the applicant's limitations. The applicant alleges that when the hydrogen desorption ratio does not meet this limitation that the wear resistance of the tire tread lowers and the heat build up becomes undesirable high (paragraph 0023). Sakakibara are also concerned with wear resistance (abrasion resistance) and heat build up (represented by $\tan \delta$) of tire tread (column 10, lines 7-25). The values given in Table 5 show that the carbon black of Sakakibara provides both a low heat buildup and good wear resistance. If applicant's allegations are correct, hydrogen desorption ratios of

Examples 4-7 must meet applicant's limitations otherwise the heat buildup and wear resistance values would have been bad. The examiner also notes that the applicant has not provided sufficient evidence to prove their assertion. There are no examples where all the other factors stay the same and only the hydrogen desorption ratio changes from meeting this limitation to not meeting this limitation. The applicant has failed to show that the hydrogen desorption ratio of the carbon black affects the physical structure of the rubber composition. Sakakibara does not teach a toluene tinting permeability value. The Office takes the position that Examples 4-7 would inherently meet this limitation. All four (DBP, compressed DBP, CTAB, and TINT) of the physical property tests taught by Sakakibara meet the applicant's limitations. Alternatively, the claimed properties would be obvious.

Regarding claims 4 and 5: Sakakibara teaches examples where the DBP, 24M4DBP, and CTAB values are within the claimed ranges (Examples 4-7).

Regarding claim 6: Sakakibara teach examples where the tinting strength $>0.363 \times \text{CTAB} + 71.792$ (Table 1, Examples 4 and 5).

Regarding claim 7: Sakakibara teaches examples where the tinting strength $<0.363 \times \text{CTAB} + 71.792$ and $\text{TINT} > 50$ (Table 1, Examples 6 and 7).

Regarding claim 10: Sakakibara teaches examples 4-7, which inherently meet the claimed monochlorobenzene extraction limitation. The applicant alleges that when the extraction amount with monochlorobenzene exceeds 0.15% the wear resistance is undesirably deteriorated (paragraph 0024). Sakakibara is also concerned with wear

resistance (abrasion resistance) of tire tread (column 10, lines 21-25). The values given in Table 5 shows that examples 4-7 have superior wear resistance. If applicant's allegations are correct the extraction amount with monochlorobenzene of examples 4-7 must not be more than 0.15% otherwise the wear resistance values would have been bad. The examiner also notes that the applicant has not provided sufficient evidence to prove their assertion. There are no examples where all the other factors stay the same and only the extraction amount with monochlorobenzene changes from at or below 0.15% to above 0.15%. The applicant has failed to show that the extraction amount with monochlorobenzene of the carbon black affects the physical structure of the rubber composition.

Regarding claim 11: Sakakibara teaches that their composition is used in tire treads of various automobiles (column 1, lines 7-12) and that the tires are made for low fuel consumption (column 1, lines 21-31). Given the description of Sakakibara the skilled artisan would immediately envisage pneumatic tires.

Response to Arguments

Applicant's arguments filed 11/30/2010 have been fully considered but they are not persuasive.

The declaration under 37 CFR 1.132 filed 3/30/2010, even if it were entered is insufficient to overcome the rejection as set forth in the last Office action because: Applicant has used a different reactor for making the carbon black than was used in

Sakakibara. Sakakibara consider their reactor to be critical in producing their carbon black. In their comparative examples the reactor was altered to show the beneficial results provided using their reactor (see figures 3 and 4).

The Applicant has stated that Sakakibara does not disclose or suggest the effects of hydrogen desorption ratio and the toluene tinting permeability of carbon black on the wear resistance and low heat buildup. These tests are used to determine the physical properties of the carbon black. Sakakibara teaches several types of tests that are used to determine the physical properties of the carbon black (column 3, line 49 to column 5, lines 32). Sakakibara teaches optimizing the properties that underlie the tests, which is the size, shape, and surface properties of the carbon black (column 3, line 50 to column 4, line 62) to obtain good wear resistance (abrasion resistance) and heat build up (represented by $\tan \delta$) of tire tread (column 10, lines 7-25). Since Sakakibara provides teaching and motivation that the physical properties of the carbon black have an effect on good wear resistance and heat build up. They would be motivated to optimize the properties for good wear resistance and heat build up. Just because Sakakibara did not perform the same test on their carbon black does not mean they did not recognize that that particular physical property that the test measures is important for obtaining good wear resistance and heat build up.

The toluene tinting permeability and hydrogen desorption values quoted by the Applicant are from the declaration filed 3/30/2010. Applicant has used a different reactor for making the carbon black than was used in Sakakibara. Sakakibara consider their

reactor to be critical in producing their carbon black. In their comparative examples the reactor was altered to show the beneficial results provided using their reactor (see figures 3 and 4). Therefore the values are not accurate values of what the invention of Sakakibara produces.

The Applicant has alleged unexpected results. The Applicant has not overcome the 102(b) rejection, which is a statutory bar and unexpected results are not applicable.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Uselding whose telephone number is (571)270-5463. The examiner can normally be reached on Monday-Thursday 6:00am-4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Milton I. Cano/
Supervisory Patent Examiner, Art Unit 1763

/JU/
Examiner
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